PIONEER SA-9800HG

MODEL

SERVICE MANUAL

- PA-L(GWH-125) and PA-R(GWH-126) assemblies for HG type are the same as the S, S/G types, please refer to the SA-9800/S, S/G additional service manual.
- The circuitry of the Tape switch assembly(GWS-183) is the same as the GWS-172(for KU type).

Parts List of Power Supply Assembly (AWR-196)

CAPACITORS

Part No.	Symbol & Description		
CQMA 103K 400	C1		
CEB 221P 80	C2, C3		
CEA 470P 10	C4		
CKDYB 152K 50	C5		
CCDSL 470K 50	C6, C11, C12		
CEA 470P 63	C7–C10		
CEA 2R2P 50	C13, C14		
CEA 101P 35	C15, C16		
CEA 100P 80	C17		
⚠ ACG-001	C18	Ceramic	0.01/250V

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
⚠ RD ¼PMF □□□ J	R1, R2, R10, R11, R23
RD¼PM □□□ J	R3, R4, R6–R9, R12–R19, R24–R27
⚠ RS2P □□□ J	R5
⚠ RT5B □□□ K	R21, R22

SEMICONDUCTORS

Part No.	Symbol & Description
2SC1735	Q1, Q2
2SA733A	Q3, Q10
2SA904A (2SA893A)	Q4, Q8
2SK34	Q5, Q6
2SC1914A (2SC1890A)	Q7
2SC945A	Q9
2SD712 (2SD313P)	Q11, Q13
2SB682 (2SB507P)	Q12, Q14
SIB01-02	D1–D4
1S1555 (1S2473)	D6, D7
10E2	D8, D9
XZ-060	D5
MZ-177 (WZ-177)	D10

OTHERS

Part No.	Symbol & Description	
⚠ ATT-577	T3	Transformer
⚠ AEC-294		Capacitor cover (for C18)
ABA-026		Pan head screw

Parts List of Input Terminal Assembly (GWX-291)

Part No.	Symbol & Description	
ASH-018	S1	Slide switch (PHONO INTERFRERENCE)
RD¼PM 102J	R1–R4	
AKB-054		Terminal (INPUT)

Parts List of Tape Terminal Assembly (GWX-292)

Part No.	Symbol & Description	
RD¼PM 394J	R5, R6	
AKB-054		Terminal (TAPE 1, 2)

Parts List of DIN Connector Assembly (GWX-293)

Part No.	Symbol & Description	
AKP-011		Connector socket 5-P (REC/PLAY)
RD¼PM 104J	R7, R8	

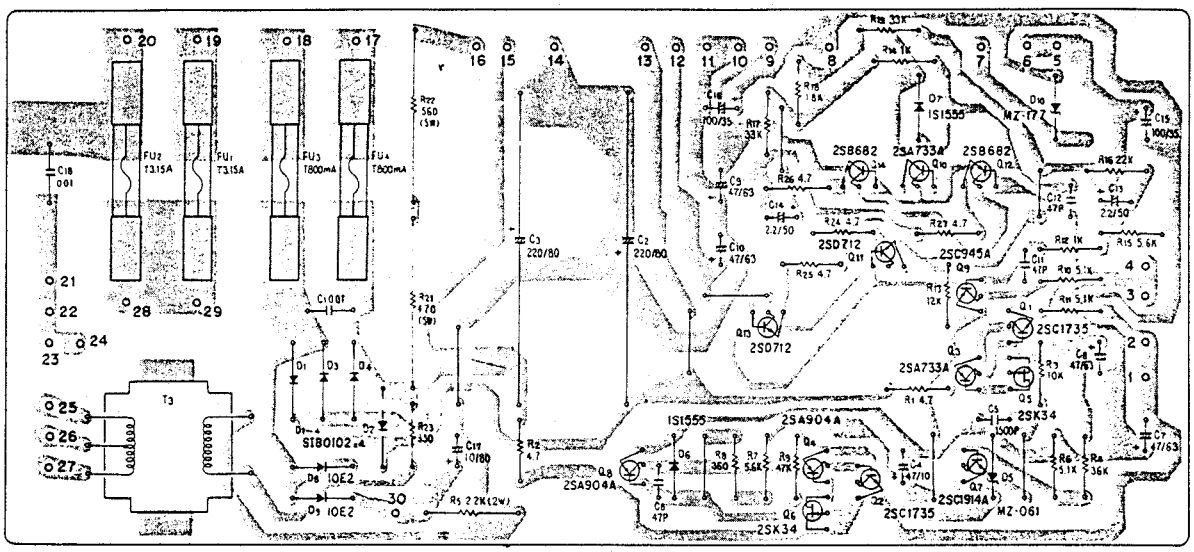
Parts List of EQ Assembly (GWF-118)

CAPACITORS

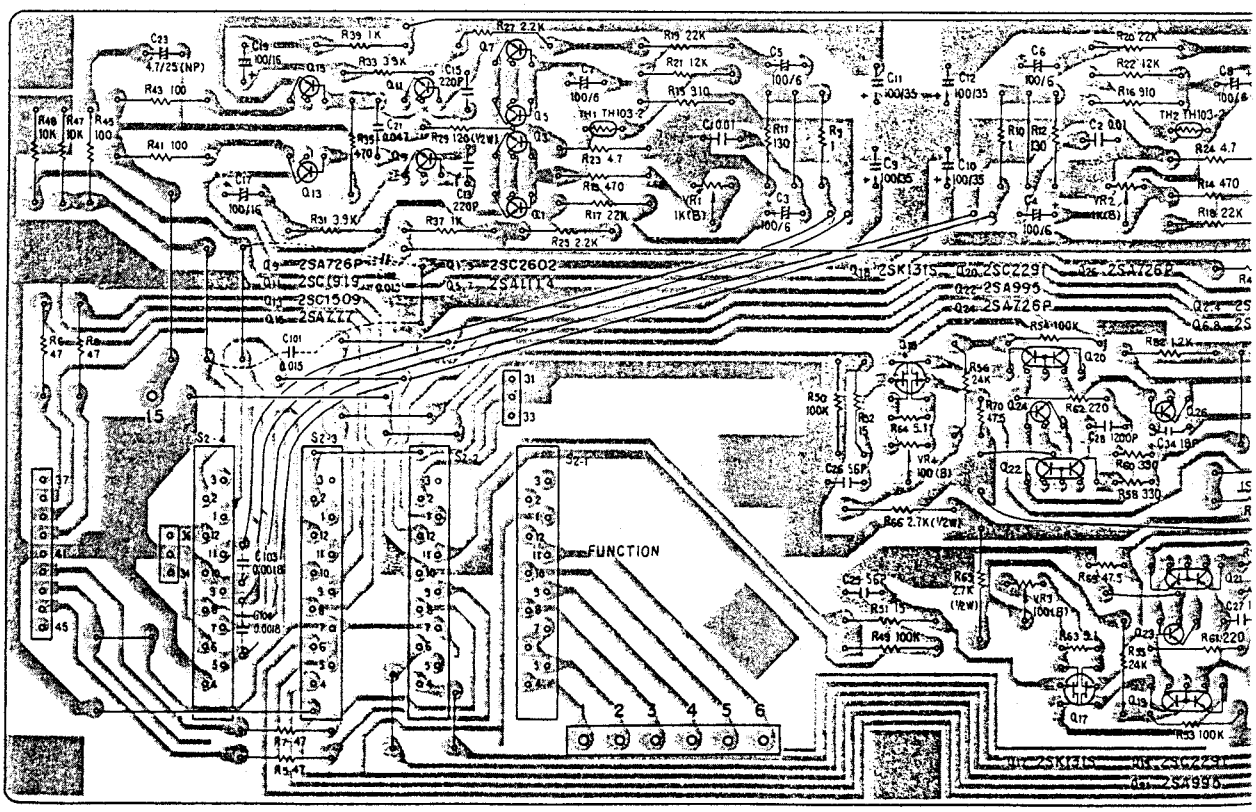
Part No.	Symbol & Description	
CQMA 103K 50	C1, C2	
CEANL 101M 6	C3–C8	
CEA 101P 35	C9–C12	
CCDSL 221K 50	C13–C16	
CEA 101P 16	C17–C20	
CQMA 473K 50	C21, C22, C37, C38	
ACH-318	C23, C24, C41, C42	Electrolytic 4.7/25V(NP)
CCDSL 560K 50	C25, C26	
CKDYB 122K 50	C27, C28	
CQPA 353G 50	C29, C30	
CQPA 124G 50	C31, C32	
CCDSL 180K 50	C33, C34	
CEA 221P 10	C35, C36	
CQMA 472K 50	C39, C40	
CQMA 392K 50	C43, C44	
CEA 470P 50	C45, C46	
CQMA 153K 50 (CQMA 153J 50)	C101, C102	
CQMA 182K 50	C103, C104	

P.C. BOARD ASSEMBLIES

Power Supply Assembly (AWR-196)



EQ Assembly (GWF-118)



Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description		
ACP-077	VR1, VR2	Semifixed	1k-B
ACP-019	VR3, VR4	Semifixed	100-B
RD¼PM □□□ J	R5–R24, R31–R34, R45–R56, R61		
RD¼PM □□□ J	R62, R77–R80, R91–R96		
⚠ RD¼PMF □□□ J	R25–R28, R35–R44, R81–R90		
⚠ RD½PSF □□□ J	R29, R30		
RN½SQ □□□□ F	R57–R60, R67–R76		
RN¼SR □□□□ F	R63, R64		
RD½PS □□□ J	R65, R66		

SEMICONDUCTORS

Part No.	Symbol & Description
2SC2602	Q1–Q4
2SA1114	Q5–Q8
2SA726P (2SA750)	Q9, Q10, Q23–Q26
2SC1919 (2SC1400)	Q11, Q12, Q27, Q28
⚠ 2SC1509	Q13, Q14, Q29, Q30
⚠ 2SA777	Q15, Q16, Q31, Q32
2SK131S	Q17, Q18
2SC2291	Q19, Q20
2SA995	Q21, Q22
1S1555 (1S2473)	D1, D2
TH103-2	Th1, Th2

OTHERS

Part No.	Symbol & Description	
ASD-113	S2	Rotary switch (FUNCTION)
AKH-009		Transistor socket
ABN-024		Washerfaced nut
ABA-048		Screw 3x6

Parts List of PA-L Assembly (GWH-125)

CAPACITORS

Part No.	Symbol & Description
CEANL 2R2P 50	C1
CCDSL 101K 50	C3
CCDSL 470K 50	C5, C7
CCDSL 390K 50	C9
CEA 470P 63	C11, C13
CCDSL 820K 50	C15
⚠ CQMA 102K 400	C17
CQMA 472K 50	C19
CQMA 103K 50	C21, C23
⚠ CCDSL 470 K 500	C25, C27
⚠ CQMA 104J 50	C29, C31

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description		
ACP-035	VR1	Semifixed	330k-B
ACP-019	VR3	Semifixed	100-B
ACP-076	VR5	Semifixed	68k-B
RD¼PM □□□ J	R1, R3, R5, R7, R9, R11, R19, R23, R25		
RD¼PM □□□ J	R27, R45, R49, R51, R57, R67, R69, R91		
⚠ RD¼PM □□□ J	R37, R39, R75, R77		
⚠ RD¼PMF □□□ J	R13, R15, R29, R31, R41, R47, R53		
⚠ RD¼PMF □□□ J	R55, R59, R61, R63, R65, R71		
⚠ RD½PS □□□ J	R17, R73		
RS1P □□□ J	R21		
⚠ RD¼PMF □□□ J	R33, R35, R43		
⚠ ACN-041	R79, R81, R83, R85	Wire wound	0.47/5W
⚠ RS1P □□□ J	R87, R89		

SEMICONDUCTORS

Part No.	Symbol & Description
2SC1775A-E	Q1
2SA979-F	Q3
2SC2291	Q5
2SA912	Q7
2SA726S	Q9
2SC1885	Q11
2SC1400	Q13, Q19
2SA750	Q15, Q17
2SA904A	Q21
2SC1890A	Q23

Part No.	Symbol & Description
2SA733A	Q25, Q29
2SC945A	Q27, Q31
2SC1913	Q33
2SA913	Q35
1S1555 (1S2473)	D1, D3, D7, D11, D13, D15, D17
MZ-061 (WZ-061)	D5
STV2H-O	D9
1S2471	D19, D21, D23, D25, D27, D29
TH103-2	Th1

OTHERS

Part No.	Description
ABA-048	Screw 3x6
ABA-026	Screw 3x6 (Pan head)

Parts List of PA-R Assembly (GWH-126)

CAPACITORS

Part No.	Symbol & Description
CEANL 2R2P 50	C2
CCDSL 101K 50	C4
CCDSL 470K 50	C6, C8
CCDSL 390K 50	C10
CEA 470P 63	C12, C14
CCDSL 820K 50	C16
⚠ CQMA 102K 400	C18
CQMA 472K 50	C20
CQMA 103K 50	C22, C24
⚠ CCDSL 470K 500	C26, C28
⚠ CQMA 104J 50	C30, C32

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

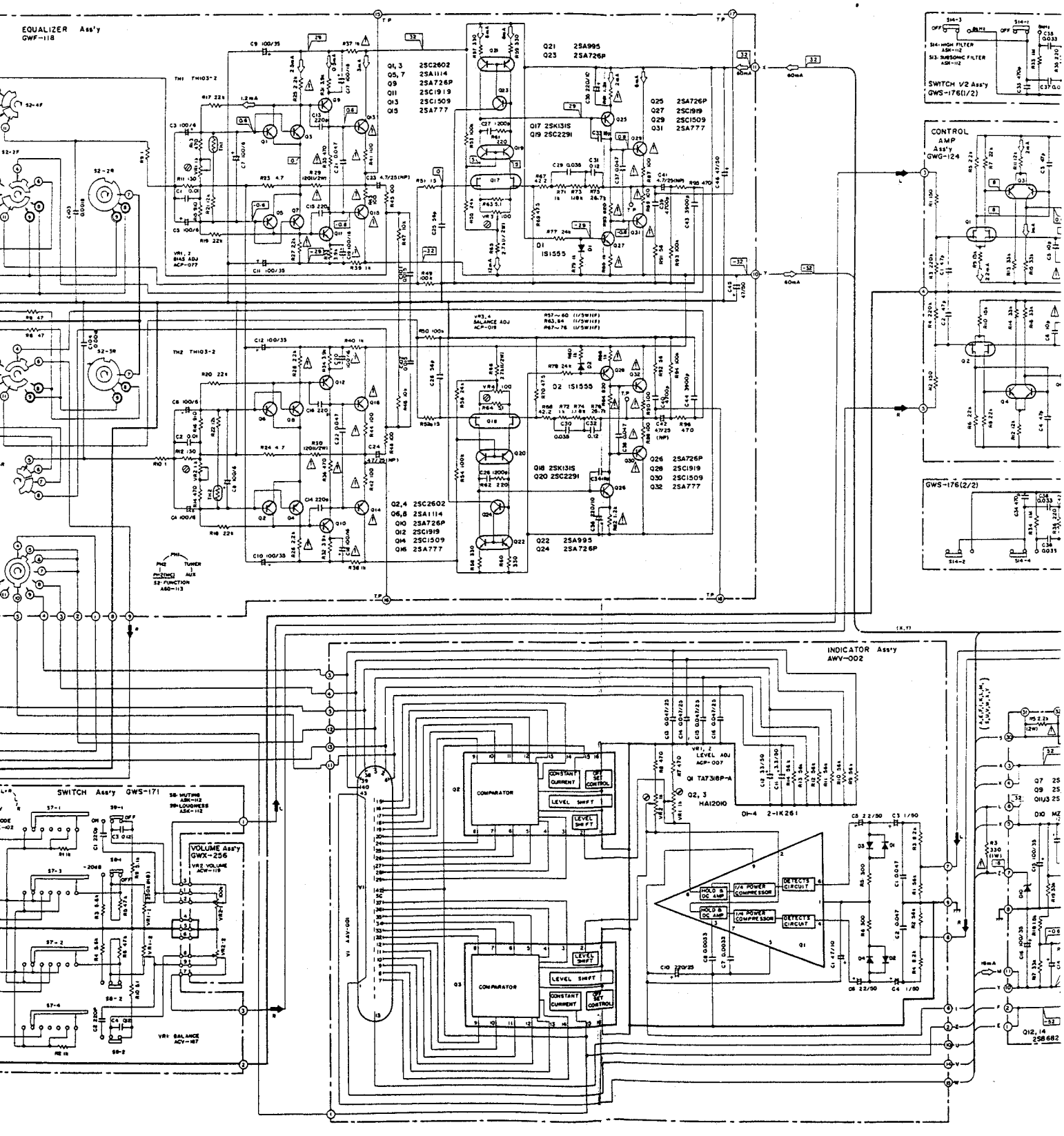
Part No.	Symbol & Description		
ACP-035	VR2	Semifixed	330k-B
ACP-019	VR4	Semifixed	100-B
ACP-076	VR6	Semifixed	68k-B
RD¼PM □□□ J	R2, R4, R6, R8, R10, R12, R20, R24, R26		
RD¼PM □□□ J	R28, R46, R50, R52, R58, R68, R70, R92		
⚠ RD¼PM □□□ J	R38, R40, R76, R78		
⚠ RD¼PMF □□□ J	R14, R16, R30, R32, R42, R48, R54		
⚠ RD¼PMF □□□ J	R56, R60, R62, R64, R66, R72		
⚠ RD½PS □□□ J	R18, R14		
RS1P □□□ J	R22		
⚠ RD¼PMF □□□ J	R34, R36, R44		
⚠ ACN-041	R80, R82, R84, R86		
		Wire wound	0.47/5W
⚠ RS1P □□□ J	R88, R90		

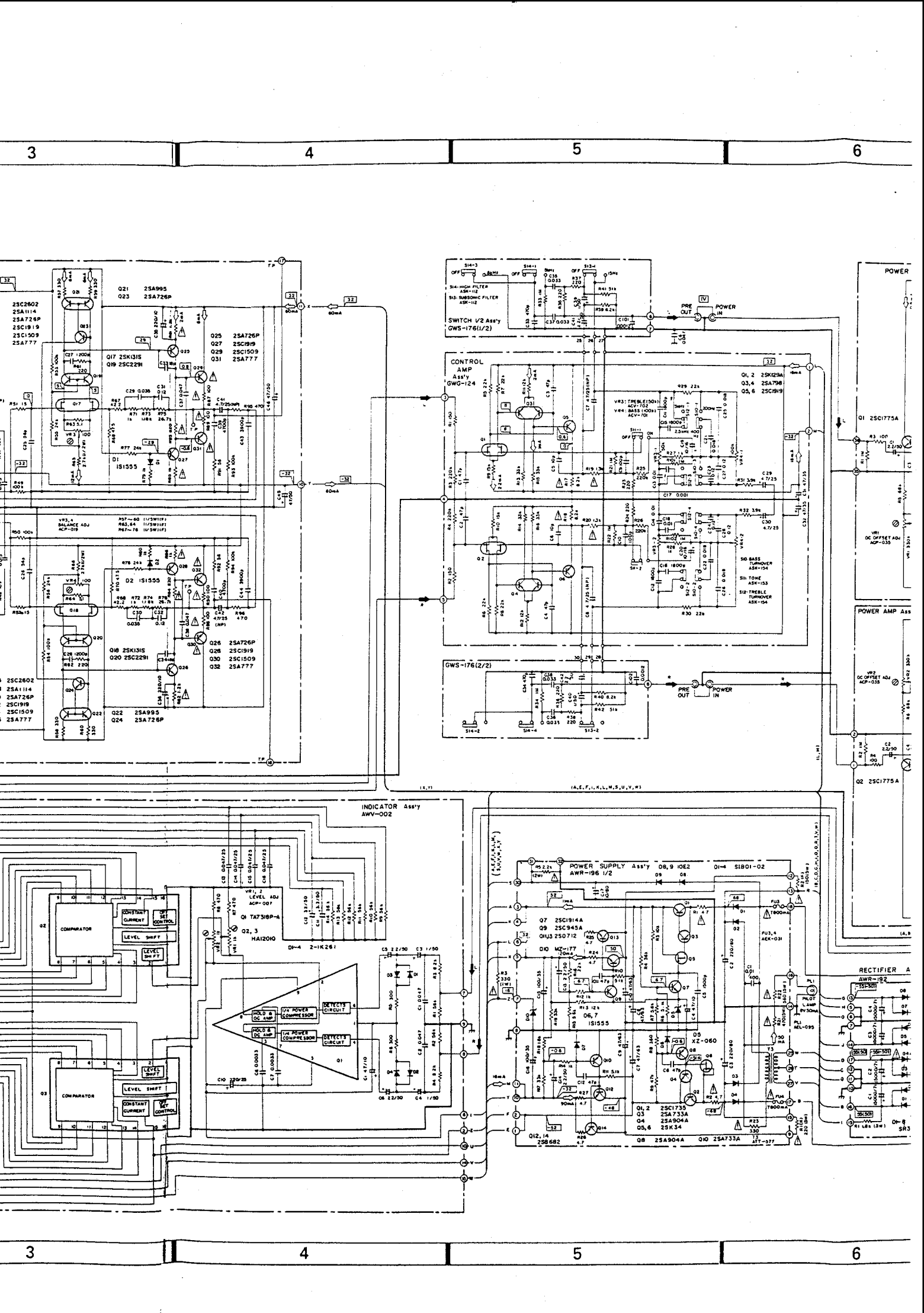
SEMICONDUCTORS

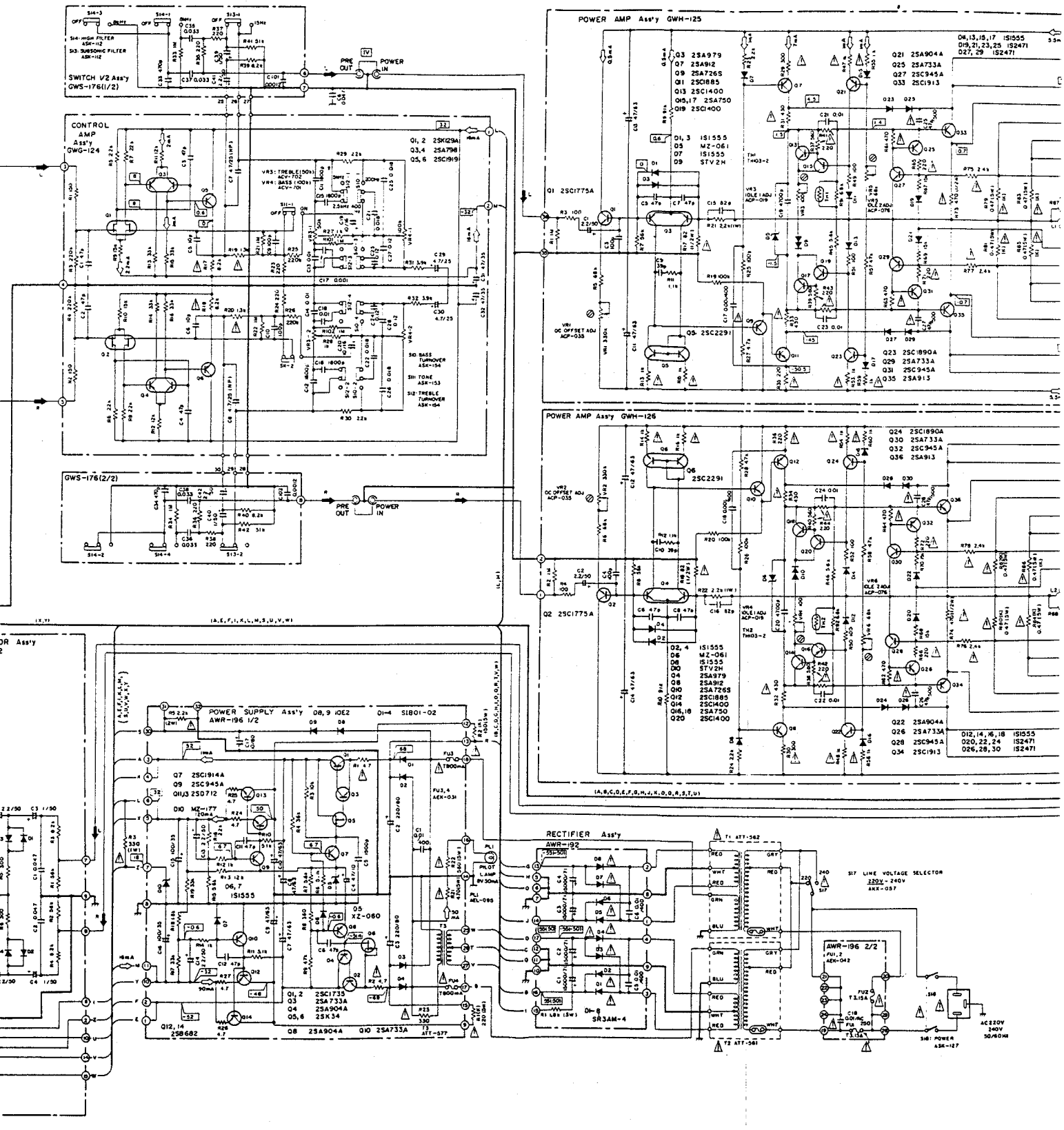
Part No.	Symbol & Description
2SC1775A-E	Q2
2SA979-F	Q4
2SC2291	Q6
2SA912	Q8
2SA726S	Q10
2SC1885	Q12
2SC1400	Q14, Q20
2SA750	Q16, Q18
2SA904A	Q22
2SC1890A	Q24
2SA733A	Q26, Q30
2SC945A	Q28, Q32
2SC1913	Q34
2SA913	Q36
1S1555 (1S2473)	D2, D4, D8, D12, D14, D16, D18
MZ-061 (WZ-061)	D6
STV2H-O	D10
1S2471	D20, D22, D24, D26, D28, D30
TH103-2	Th2

OTHERS

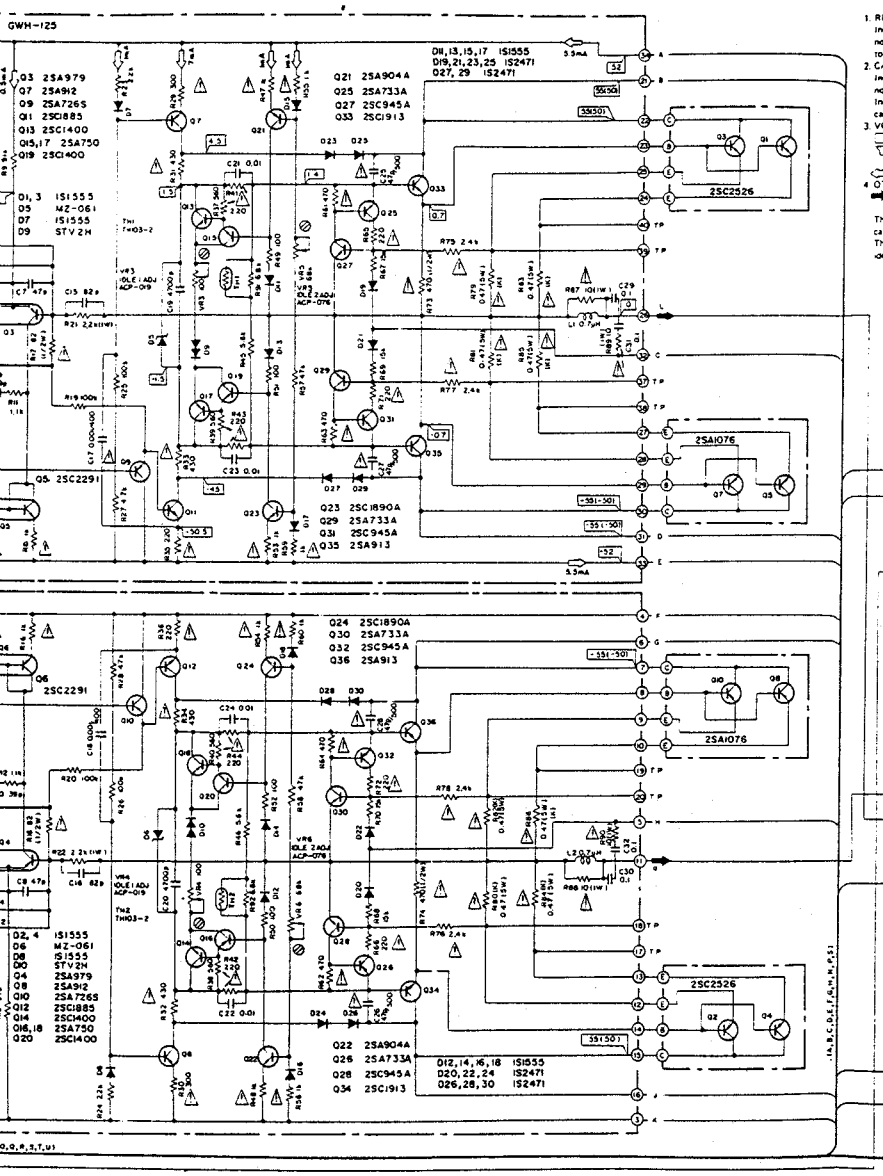
Part No.	Description
ABA-048	Screw 3x6
ABA-026	Screw 3x6 (Pan head)


EQUALIZER Ass'y
GWF-118
SWITCH Ass'y GWS-171
VOLUME Ass'y
GWX-256
INDICATOR Ass'y
AWV-002
CONTROL AMP Ass'y
GWG-124
SWITCH V2 Ass'y
GWS-176(1/2)
GWS-176(2/2)
Q1, 3 2SC2602
Q5, 7 2SA1114
Q9 2SA726P
Q11 2SC1919
Q13 2SC1509
Q15 2SA777
Q21 2SA995
Q23 2SA726P
Q25 2SA726P
Q27 2SC1919
Q29 2SC1509
Q31 2SA777
Q17 2SK131S
Q19 2SC2291
D1 1S1555
Q2, 4 2SC2602
Q6, 8 2SA1114
Q10 2SA726P
Q12 2SC1919
Q14 2SC1509
Q16 2SA777
Q18 2SK131S
Q20 2SC2291
D2 1S1555
Q22 2SA995
Q24 2SA726P
Q26 2SA726P
Q28 2SC1919
Q30 2SC1509
Q32 2SA777
32-FUNCTION ASD-113
SB-MUTING ASK-112
SB-LOUDNESS ASK-112
SW4-HIGH FILTER ASH-112
SW3-SUBSONIC FILTER ASH-112
COMPARATOR
CONSTANT CURRENT
LEVEL SHIFT
Q1 TA7318P-A
Q2, 3 HA12010
D1-4 2-1K261
012, 14 258682

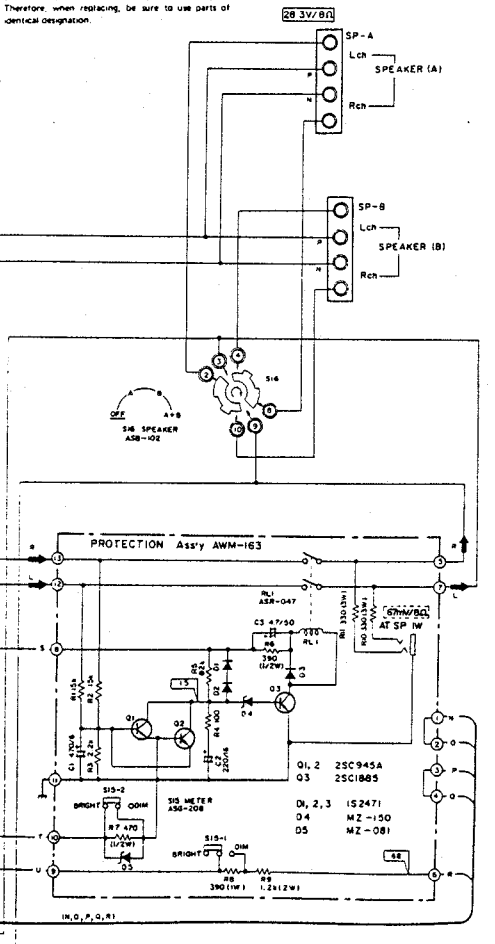

3
4
5
6
SWITCH I/2 Ass'y
GWS-176(1/2)
CONTROL
AMP
Ass'y
GWG-124
GWS-176(2/2)
POWER AMP Ass
INDICATOR Ass'y
AWV-002
POWER SUPPLY Ass'y
AWR-196 1/2
RECTIFIER
AWR-192
PRE
OUT
POWER
IN
COMPARATOR
CONSTANT
CURRENT
LEVEL SHIFT
OFF SET CONTROL
HOLD & DC AMP
1/4 POWER COMPRESSOR
DETECTS CIRCUIT
Q1 2SC1775A
Q2 2SC1775A
Q21 2SA995
Q23 2SA726P
Q25 2SA726P
Q27 2SC1919
Q29 2SC1509
Q31 2SA777
Q17 2SK131S
Q19 2SC2291
D1 1S1555
Q22 2SA995
Q24 2SA726P
Q26 2SA726P
Q28 2SC1919
Q30 2SC1509
Q32 2SA777
Q18 2SK131S
Q20 2SC2291
D2 1S1555
2SC2602
2SA1114
2SA726P
2SC1919
2SC1509
2SA777
Q7 2SC1914A
Q9 2SC945A
Q10 MZ-177
Q6, 7 1S1555
Q5 XZ-060
Q1, 2 2SC1735
Q3 2SA733A
Q4 2SA904A
Q5, 6 2SK34
Q8 2SA904A
Q10 2SA733A
Q12, 14 2SB682
Q1, 2 2SK129A
Q3, 4 2SA798
Q5, 6 2SC1919
Q2, 3 HA12010
Q1 TA7318P-A
SIG: HIGH FILTER ASH-112
SIG: SUBSONIC FILTER ASH-112
SIO BASS TURNOVER ASK-154
SII TONE ASK-153
SI2: TREBLE TURNOVER ASK-154
VR1, 2 LEVEL ADJ ACP-007
VR3, 4 BALANCE ADJ ACP-019
VR3 DC OFFSET ADJ ACP-035
VR1 DC OFFSET ADJ ACP-035
FU1, 2 T800mA
FU3, 4 AEK-031
PL1 PILOT LAMP 8V 50mA
T1 AEL-095
T2 AFT-577
T3 XZ-060
60mA
90mA
16mA
18mA
22mA
DI-4 2-1K261
DI-4 S1B01-02

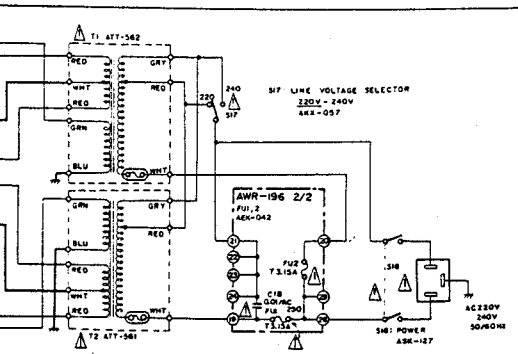

SWITCH V2 Ass'y GWS-176(1/2)
CONTROL AMP Ass'y GWG-124
GWS-176(2/2)
POWER AMP Ass'y GWH-125
POWER AMP Ass'y GWH-126
POWER SUPPLY Ass'y AWR-196 1/2
RECTIFIER Ass'y AWR-192
AWR-196 2/2
PRE OUT
POWER IN
Q1 2SC1775A
Q2 2SC1775A
Q5 2SC2291
Q6 2SC2291
Q3 2SA979
Q7 2SA912
Q9 2SA726S
Q11 2SC1885
Q13 2SC1400
Q15,17 2SA750
Q19 2SC1400
Q21 2SA904A
Q25 2SA733A
Q27 2SC945A
Q33 2SC1913
Q24 2SC1890A
Q30 2SA733A
Q32 2SC945A
Q36 2SA913
Q22 2SA904A
Q26 2SA733A
Q28 2SC945A
Q34 2SC1913
Q7 2SC1914A
Q9 2SC945A
Q11/13 2SD712
Q10 MZ-177
Q8 2SA904A
Q10 2SA733A
Q12, 14 2SB682
SR3AM-4
AC220V 240V 50/60Hz

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.



1. RESISTOR.
Indicated in Ω, 1/4W, ±5% tolerance unless otherwise noted. K, kΩ; M, MΩ; (F); ±1%, (G); ±2%, (K); ±10% tolerance.
2. CAPACITORS.
Indicated in capacity (μF)/voltage(V) unless otherwise noted. p, pF
Indication without voltage is 50V except electrolytic capacitor
3. VOLTAGE CURRENT.
Signal voltage at 100W + 100W 8Ω output
DC voltage (V) at no input signal
Value in ( ) is DC voltage at rated power
mA DC current at no input signal
4. OTHERS.
Signal route.
Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.





SWITCHES:

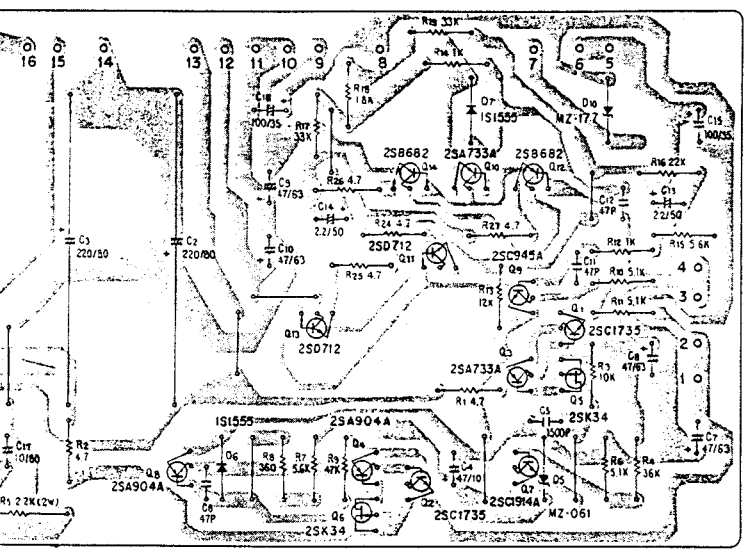
S1: PHONO INTERFERENCE FILTER	OFF-ON	S13: SUBSONIC FILTER	OFF-15Hz
S2: FUNCTION	PHONO 2(MC)-PHONO 2(MM)-PHONO 1(MM)-TUNER-AUX	S14: HIGH FILTER	OFF-8kHz
S3: CARTRIDGE LOAD (C)	100p-200p-300p-400p-500p	S15: METER	BRIGHT-DIM
S4: CARTRIDGE LOAD (R)	100-10k-25k-50k-100k	S16: SPEAKER	OFF-A-B-A+B
S5: TAPE MONITOR	1-OFF-2	S17: LINE VOLTAGE SELECTOR	220V-240V
S6: TAPE DUPLICATE	1+2-OFF-2+1	S18: POWER	OFF-ON
S7: MODE	REV-STEREO-L+R-L-R		
S8: MUTING	OFF--20dB		
S9: LOUDNESS	OFF-ON		
S10: BASS TURNOVER	400Hz-200Hz		
S11: TONE	OFF-ON		
S12: TREBLE TURNOVER	2.5kHz-5kHz		

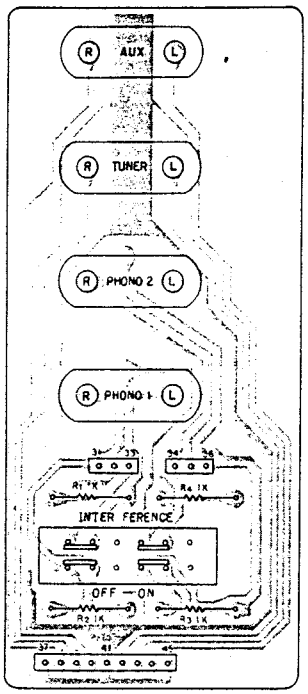
The underlined indicates the switch position.

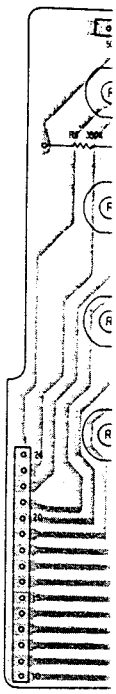
This is the basic schematic diagram, but the actual circuit may vary due to improvements in disign.

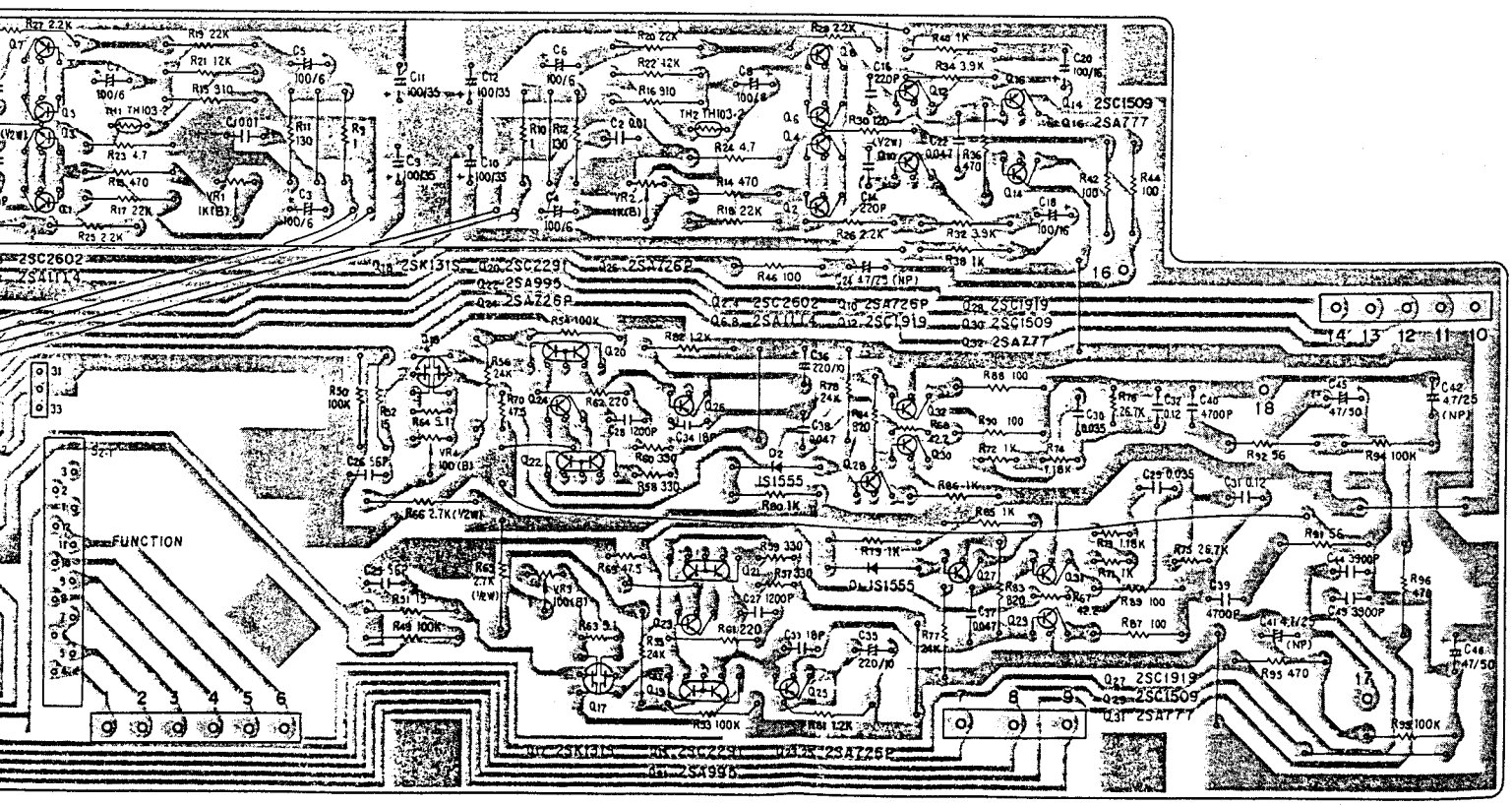
Input Terminal Assembly (GWX-291)

Tape Terr



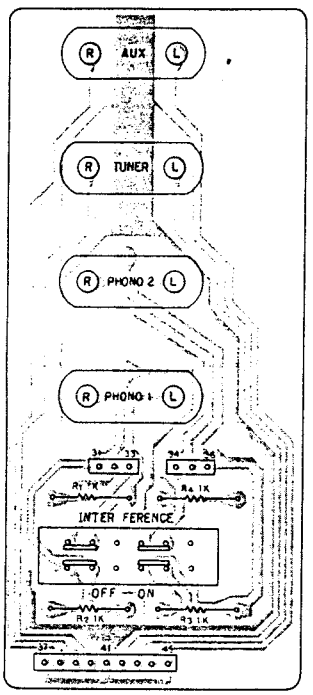




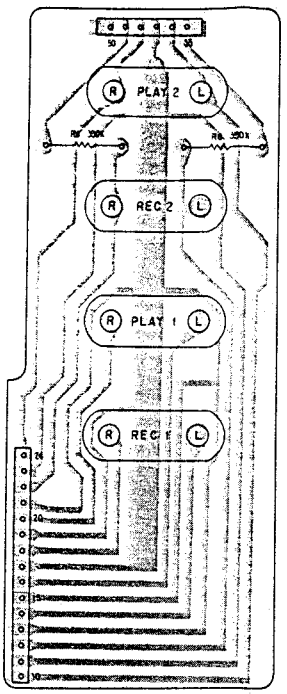


4	5	6

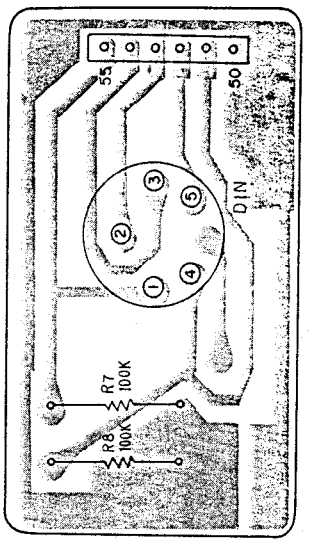
Input Terminal Assembly
(GWX-291)

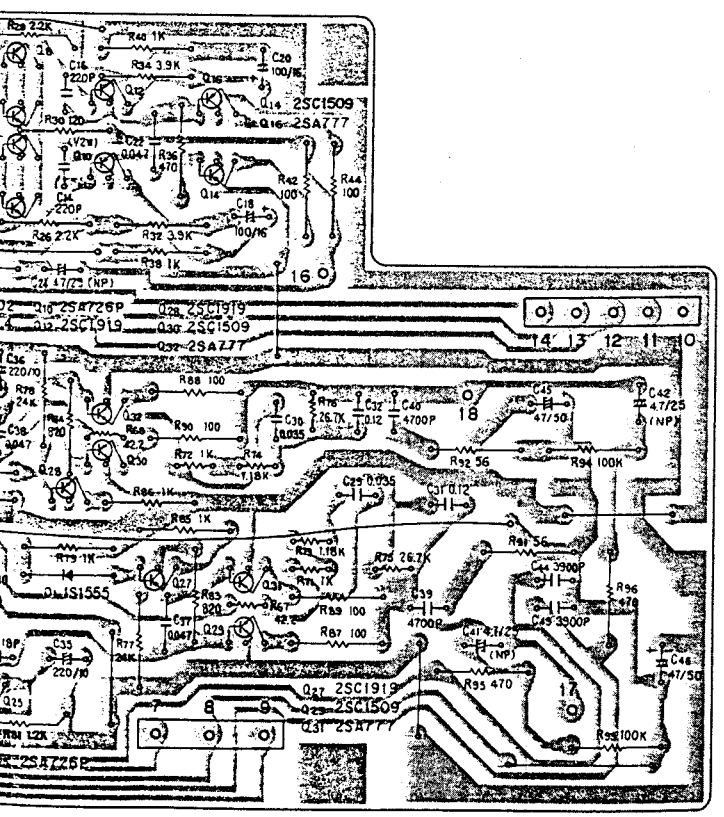


Tape Terminal Assembly
(GWX-292)

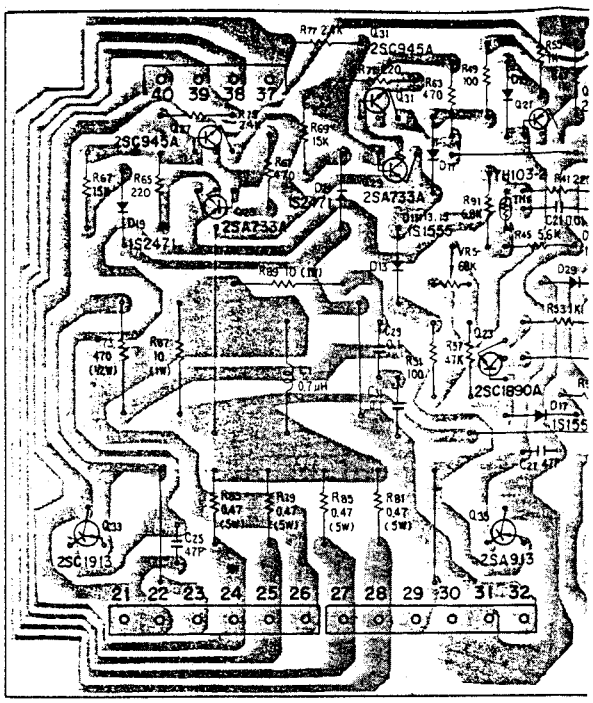


DIN Connector Assembly
(GWX-293)

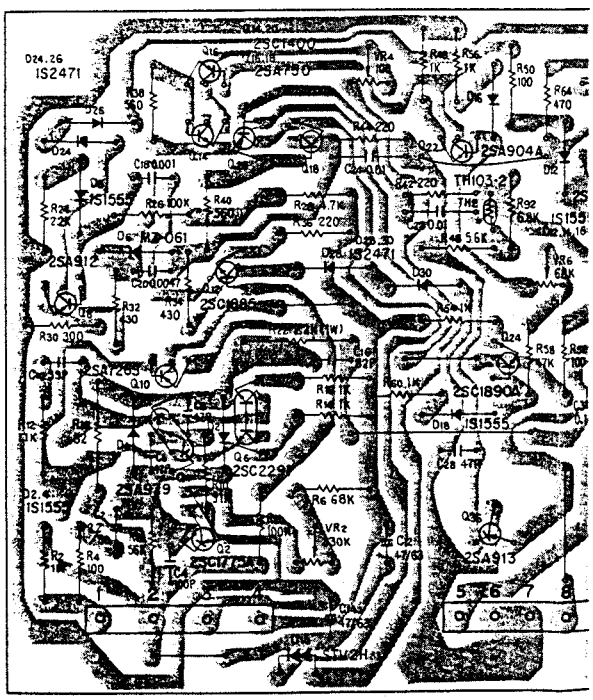




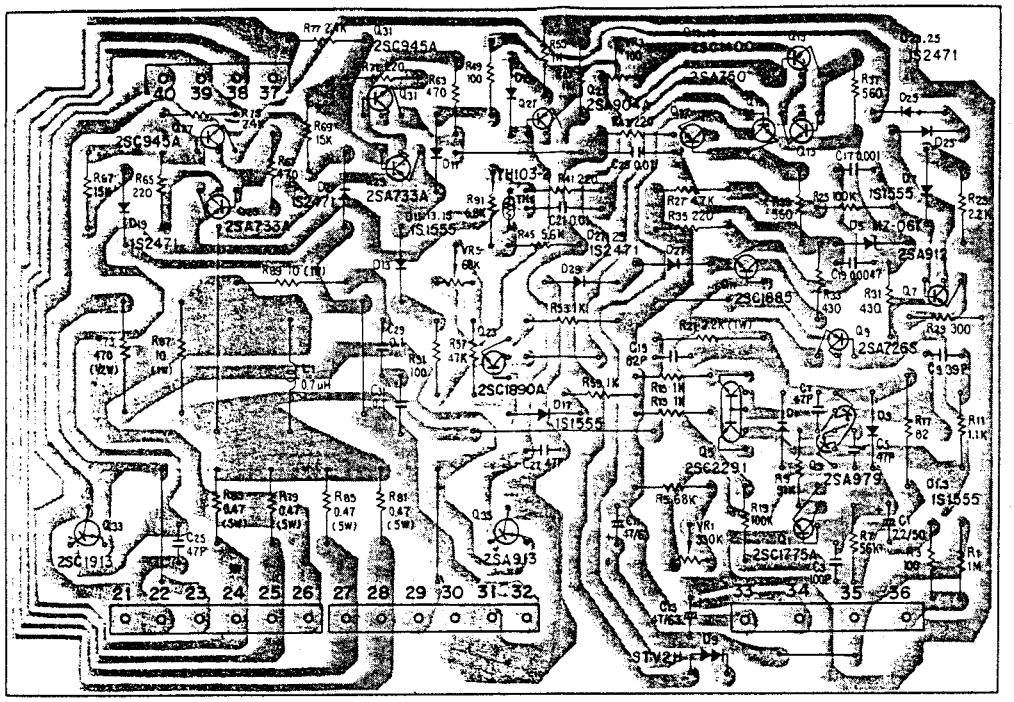
PA-L Assembly (GWH-125)



PA-R Assembly (GWH-126)



PA-L Assembly (GWH-125)



PA-R Assembly (GWH-126)